

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	22.208	29.760	18.688	0.000	18.688	17.599	18.248	18.819	19.394	Continuing	Continuing
P804: Development Test & Evaluation	17.835	19.148	17.052	0.000	17.052	15.870	16.329	16.813	17.297	Continuing	Continuing
P805: Software Engineering and System Assurance	2.873	2.764	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P806: Energy	1.500	1.410	1.636	0.000	1.636	1.729	1.919	2.006	2.097	Continuing	Continuing
P052: Contingency Acquisition Support Model	0.000	6.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>This program supports Developmental Test and Evaluation (DT&E) oversight of the DoD’s Major Defense Acquisition Programs (MDAPs) and all other weapons systems as stated by the Secretary of Defense. Activities in this program include developing and disseminating policy and guidance to support DT&E in the acquisition process. This program provides updates to DoD 5000.02 and the Defense Acquisition Guidebook (DAG) and tracks and evaluates the effectiveness of the Technology Development Strategy, and the Acquisition Strategy, the Test and Evaluation Strategy (TES). This program also supports the process for the development of the Test and Evaluation Master Plans (TEMP). Efforts determine the adequacy of program development structure and development plans, substantiation technical performance requirements achievement, identification of design risks, system certification for Operational Test and Evaluation, and ensures programs are sound, well executed and sufficiently address war fighter requirements.</p> <p>This program develops education and training materials for instructing, maintaining and enhancing the defense acquisition workforce. Activities include developing guidance to enhance DT&E acquisition career planning and progression, monitoring and facilitating Defense Acquisition University (DAU) updates of courses to ensure curriculum represents the education and training requirements necessary to be a viable team member in the acquisition process.</p> <p>FY 2010 will see a significant ramp-up in activity as DoD takes on the reconstituting of the DT&E office in response the Weapons System Acquisition Reform Act (WSARA) of 2009 which mandated the Director, Developmental Test and Evaluation (DDT&E) have oversight of all MDAPs reporting directly to the Under Secretary of Defense (Acquisition, Technology and Logistics (USD(AT&L))). Traction is being gained in a renewed focus on DT&E. DoD must redouble its efforts to increase direct oversight programs through early involvement with intensive DT&E prior to Initial Operational Test and Evaluation (IOT&E). New approaches, with associated policy,</p>											

UNCLASSIFIED

R-1 Line Item #160

Page 1 of 19

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
0400: Research, Development, Test & Evaluation, Defense-Wide		PE 0605804D8Z: Development Test & Evaluation			
BA 6: RDT&E Management Support					
guidance, education and training are essential in early DT&E as DoD has become acutely aware of DT&E's role in both a successful acquisition process and fielding of MDAPs.					
This program funds technical analyses and policy guidance for the DoD operational energy programs and initiatives including institutionalizing energy in DoD's business processes (e.g., Fully Burdened Cost of Fuel and the Energy Efficiency Key Performance Parameters (KPP)).					
Due to the Weapons Systems Reform Acquisition Act of 2009, which directed a new Office of the Director, Systems Engineering, in FY 2011, a portion of funding from this Program Element for previous systems and software engineering efforts, has been transferred to a new Systems Engineering Program Element (0605142D8Z).					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	20.396	23.512	0.000	0.000	0.000
Current President's Budget	22.208	29.760	18.688	0.000	18.688
Total Adjustments	1.812	6.248	18.688	0.000	18.688
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.658	0.000			
• Other (-\$21.244 realigned to new SE PE (0605142D8Z); + \$9.450 D, DT WSARA adjustment	2.470	-0.190	18.688	0.000	18.688
• Other (cASM)	0.000	6.438	0.000	0.000	0.000
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: P804: Development Test & Evaluation					
Congressional Add: Renewable Energy					
Congressional Add Subtotals for Project: P804					
	FY 2009	FY 2010			
	3.200	0.000			
	3.200	0.000			

UNCLASSIFIED

R-1 Line Item #160

Page 2 of 19

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense		DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>		R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2009	FY 2010
Congressional Add Totals for all Projects		3.200	0.000
<p><u>Change Summary Explanation</u></p> <p>The Under Secretary of Defense (Acquisition, Technology & Logistics) initiated implementation of the Weapons Systems Acquisition Reform Act (WSARA) by establishing a new office of the Director, Systems Engineering and a new Office of the Director, Developmental Test & Evaluation, and reallocating resources from the former Office of the Director, Systems and Software Engineering.</p> <p>In FY 2011, funding in the amount of \$21.244, from 0605804D8Z, was re-allocated to the Systems Engineeirng Program Element (0605142D8Z).</p>			

UNCLASSIFIED

R-1 Line Item #160

Page 3 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation				PROJECT P804: Development Test & Evaluation			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P804: Development Test & Evaluation	17.835	19.148	17.052	0.000	17.052	15.870	16.329	16.813	17.297	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This (P804) program supports developmental test and evaluation of the DoD's Major Defense Acquisition Programs (MDAPs) and all other weapons systems. Activities in this program include developing and disseminating policy and guidance to support acquisition Developmental Testing and Evaluation (DT&E). This program provides updates to DoD 5000.02 and the Defense Acquisition Guidebook (DAG) and tracks and evaluates the effectiveness of the Technology Development Strategy, the Acquisition Strategy, the Test and Evaluation Strategy (TES). This program also supports the process for the development of the Test and Evaluation Master Plans (TEMP). Efforts determine the adequacy of system or system of systems test development structure and development plans, substantiation of technical performance requirements, identification of design risks, system certification for Operational Test and Evaluation, and ensures programs are sound, well executed and sufficiently address war fighter requirements.</p>											
<p>Activities include the following:</p>											
<p>--Working with program managers to prepare Test and Evaluation Master Plans (TEMPs) to document the technical management approach.</p>											
<p>--Participate in Test and Evaluation (T&E) Integrated product Teams (IPTs), T&E Working IPTs.</p>											
<p>--Work to identify and resolve T&E issues, and assists in removing roadblocks to allow program test teams to develop baseline knowledge that aids in program decision making, notifying leadership immediately of issues that will have an impact on programs.</p>											
<p>--Conduct assessments of operational test readiness (AOTR),and support Nunn-McCurdy certification reviews to confirm the maturation of system capabilities during developmental testing and readiness to proceed into the initial operational test and evaluation with a high probability of being found operationally effective, suitable and survivable.</p>											
<p>This program develops competencies and requirements for education and training materials that will instruct, maintain and enhance the defense acquisition workforce. Activities include developing policy, guidance and certification standards to enhance DT&E acquisition career field planning and progression and monitoring and facilitating Defense Acquisition University (DAU) updates of courses to ensure curriculum supports the certification standards and provides the education and training necessary to be a viable team member in the acquisition process.</p>											

UNCLASSIFIED

R-1 Line Item #160

Page 4 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P804: Development Test & Evaluation		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Developmental Test and Evaluation Accomplishments and Plans		14.635	19.148	17.052	0.000	17.052
FY 2009 Accomplishments: Strategic Goals Supported: Technical Readiness and Technology Maturity -Provided proactive program oversight to acquisition programs to ensure appropriate levels of Systems Engineering (SE) and Developmental Test discipline are applied through all phases of the acquisition life cycle. - Monitored effectiveness of SE, Developmental Test and Evaluation (DT&E), and Software policy and guidance in acquisition programs through transparent acquisition program engagement. - Performed over 31 Major Defense Acquisition Program (MDAP) assessments in support of major acquisition decisions and special requests to include: Program Support Reviews (PSRs), Assessments of Operational Test Readiness (AOTRs), Non-Advocate Reviews (NARs), Joint Assessment Teams (JATs), and Defense Support Team reviews (DSTs). - Worked with Service components to develop, review, coordinate and staff, for approval, over 50 System EngineeringPlans (SEPs), Test and Evaluation Strategies (TESs), and Test and Evaluation Management Plans (TEMPs). -Published a revision of the Defense Acquisition Program Support (DAPS) Assessment Methodology which is utilized in program assessments. -Prepared a Program Support Review (PSR) Handbook to outline the details of executing a program assessment. -Prepared a course for Systems Engineering Evaluation of Request for Proposals. -Developed a Test and Evaluation Management Plan and Test and Evaluation Strategy Review Checklists. Utilized the checklist on 25 program TEMP's to establish an initial set of metrics to target areas for improvement thru education and guidance updates. - Published a guide for "Incorporating Test and Evaluation into DoD Acquisition Contracts." - Provided T&E and SE inputs for the DoD Instruction 5000-02 Operation of the Defense Acquisition System.						

UNCLASSIFIED

R-1 Line Item #160

Page 5 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P804: Development Test & Evaluation		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>- Provided updates to the Defense Acquisition Guidebook – Chapter 4 “Systems Engineering” and Chapter 9 “Integrated Test and Evaluation.”</p> <p>- Completed Phase II and III of Systems Planning, Research, Development and Engineering (SPRDE)-SE competency assessment. Metric: Assessed 219 SPRDE-SE subject matter experts and validated competency model.</p> <p>Strategic Goals Supported: Improve Modeling and Simulations (M&S) in Systems Engineering and Lead Acquisition Community</p> <p>- Provided necessary, SE, Developmental Test & Evaluation (DT&E) M&S policy and guidance. Metric: Published M&S Cross-Cutting Business Plan; provided necessary acquisition and technology (A&T), SE, and DT&E M&S policy and guidance; developed M&S project proposals provided evaluation guidance; and identified M&S competencies needed to support acquisition.</p> <p>Strategic Goals Supported: Improve Joint Warfighting Capability</p> <p>- Guided development of T&E infrastructure to support concept development and DT&E in improving Joint Warfighting Capabilities. Metric: Joint Test T&E Joint Feasibility Studies (JFS) selected; JT&E Program Test Plans signed; and Joint Mechanical Engineering (JME) Continuous Learning Module (CLM) developed.</p> <p>Strategic Goals Supported: Test Resources/Targets availability to meet T&E requirements</p> <p>- Ensured targets are sufficiently threat representative and available. Metric: Fifth generation full scale aerial target AoA completed; and Threat D anti-ship missile target Request for Proposals released.</p> <p>Strategic Goals Supported: Safety - Support Defense Safety Oversight Council 50% Accident Reduction Goal</p> <p>- Developed safety best practices and procedures to support acquisition programs. Metric: Chaired Acquisition Technology Program Task Force.</p>						

UNCLASSIFIED

R-1 Line Item #160

Page 6 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P804: Development Test & Evaluation		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Strategic Goals Supported: Energy - Acquisition Investment Decisions - Implemented policy regarding valuing energy in Acquisition Investment Decisions. Metric: Supported Defense Science Board Energy Security Study; led Institute for Defense Analyses (IDA) study on developing analytical tools and methodologies to support the Fully Burdened Cost of Fuel (FBCF) Pilot Program.						
University Affiliated Research Center for systems engineering - Developed Government Program Office Management plans and procedures for the Systems Engineering Research Center (SERC); developed and published a SERC research agenda; initiated efforts on 2 research tasks; developed tasks for an additional set of 5 research topics.						
FY 2010 Plans: Strategic Goals Supported: Technical Readiness and Technology Maturity -Continue to promote the application of sound systems engineering, developmental test and evaluation, and related technical disciplines across the Department's acquisition community and programs.						
Strategic Goals Supported: Improve Joint Warfighting Capability - Draft JME DoD test policy; monitor and facilitate improvements of T&E methods and processes; and monitor and facilitate improvements of T&E infrastructure to support Joint Warfighting Capability concept development.						
Strategic Goals Supported: Test Resources/Targets availability to meet T&E requirements - Monitor resource availability; draft fifth generation full scale aerial target development plan; monitor FY 2007 Test Resource Management Center (TRMC), Strategic Plan implementation; and monitor Threat D anti-ship missile target progress.						

UNCLASSIFIED

R-1 Line Item #160

Page 7 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P804: Development Test & Evaluation		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Strategic Goals Supported: Safety - Support Defense Safety Oversight Council 50% Accident Reduction Goal - Integrate safety process advances into DOD 5000.02 and the Defense Acquisition Guidebook (DAG) to reflect reporting safety risks throughout systems life cycle; evaluate/introduce safety technologies into new and legacy systems; and streamline joint safety certification requirements.						
Strategic Goals Supported: Energy - Acquisition Investment Decisions - Complete the Fully Burdened Cost of Fuel (FBCF) Pilot; integrate FBCF in Life Cycle Cost analyses; integrate FBCF construct with energy Key Performance Parameters (KPP); develop energy guidance and policy to value energy early in acquisition processes; develop FBCF course modules for DAU; provide necessary M&S policy and guidance; execute Acquisition M&S Master Plan; manage M&S Steering Committee funded projects; and develop M&S policy & guidance recommendations, as required.						
University Affiliated Research Center for systems engineering - Complete first 2 research topics, conduct SERC research review with 18 universities to review advancements across the nation in SE Research; initiate and progress on additional research efforts.						
Cyber Acquisition Program - Program Protection – Publish Program Protection Plan Guidebook. Implement Program Protection Plan (PPP) procedures with programs as they approach major milestone reviews. Conduct pilots and develop guidance for criticality analysis with Services to augment current research technology protection focused activity with procedures to ensure protection of critical components. - Supply Chain Risk Management (SCRM)–Develop acquisition guidance for SCRM, incorporating lessons learned from vulnerability assessments conducted in FY09. Assess sustainment issues for SCRM. - Defense Industrial Base Cyber Security (DIB CS)–Chair the Cyber Acquisition Joint Analysis Team (JAT), and oversee the public comment period for the Defense Federal Acquisition Regulation						

UNCLASSIFIED

R-1 Line Item #160

Page 8 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P804: Development Test & Evaluation	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Supplement (DFARS) rule on protection of defense program information; develop and implement process for adjudicating public comments. Provide acquisition support to DIB CS program. - Horizontal Protection–Transition the acquisition security database from Service-led to jointly overseen program. Develop horizontal protection requirements, develop a strategy for oversight and implementation of horizontal protection. FY 2011 Base Plans: Strategic Goals Supported: Improve Joint Warfighting Capability - Monitor and facilitate improvements of T&E methods and processes to support Joint Warfighting Capability concept development. Strategic Goals Supported: Test Resources/Targets availability to meet T&E requirements - Monitor resource availability; monitor TRMC, Strategic Plan implementation; and monitor Threat D anti-ship missile target. Strategic Goals Supported: Energy - Acquisition Investment Decisions - Provide M&S policy and guidance.					
Accomplishments/Planned Programs Subtotals	14.635	19.148	17.052	0.000	17.052
	FY 2009	FY 2010			
Congressional Add: Renewable Energy FY 2009 Accomplishments: In Authorization:	3.200	0.000			

UNCLASSIFIED

R-1 Line Item #160

Page 9 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>	PROJECT P804: <i>Development Test & Evaluation</i>
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>		
	FY 2009	FY 2010
On page 622 of the HASC committee report (H.R. 110-652 REPORT OF THE COMMITTEE ON ARMED SERVICES, HOUSE OF REPRESENTATIVES ON H.R. 5658, there is a table showing that Rep. Sires had requested \$4,000 for Renewable Fuel Systems for Defense Applications. The intended recipient is Stevens Institute of Technology and the intended location is Hoboken, NJ.		
Congressional Adds Subtotals	3.200	0.000
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A		
<u>D. Acquisition Strategy</u> Not applicable.		
<u>E. Performance Metrics</u> Not applicable.		

UNCLASSIFIED

R-1 Line Item #160

Page 10 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation				PROJECT P805: Software Engineering and System Assurance			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P805: Software Engineering and System Assurance	2.873	2.764	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Due to the Weapons Systems Reform Acquisition Act of 2009, which directed a new Office of the Director, Systems Engineering, in FY 2011, funding from this project (P805) for previous Director, Systems and Software Engineering efforts, have been transferred to a new Systems Engineering Program Element (0605142D8Z).											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Software Engineering and System Assurance Initiatives FY 2009 Accomplishments: Support Acquisition Success: - Provided software and system assurance expertise for Acquisition Category (ACAT) Identification/ Identity and Access Management (ID/IAM) and special interest programs. Improved State-of-the-Practice of Software Engineering: - Conducted study of corrective action for software T&E, and software reliability. - Developed comprehensive plan for implementing program protection policy and guidance, published Program Protection Action Plan and established Executive Council to oversee 8 working group activities covering procedures, guidance, tools and education. - Using the System of Systems (SoS) SE Guidebook as a foundation, conducted and published study of SoS T&E and a comparison of SoS to Net-Centric Enterprise and Service Oriented Architecture practice. Partnered with Australia Defense Military Organization to produce a paper on SoS Artifacts that will support SoS program management offices.							2.873	2.764	0.000	0.000	0.000

UNCLASSIFIED

R-1 Line Item #160

Page 11 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P805: Software Engineering and System Assurance		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>- Developed strategy for economical use of the Capability Maturity Model Integration (CMMI), produced, with industry, a white paper on proper use of CMMI to avoid excessive charges to the customer for CMMI implementation.</p> <p>Provided Software Leadership and Outreach:</p> <p>- Implemented Department/National strategic plan for meeting defense software requirements.</p> <p>- Participated in Service-led software initiatives, e.g., Army Strategic Software Improvement Program and multi-national forums, e.g., Software Intensive Systems Acquisition Improvement Group.</p> <p>Ensured Adequate Software Resources to Meet DoD Needs:</p> <p>- Prepared the Software Engineering Graduate Reference Curriculum for publication, hosting workshops across the globe and obtaining input and endorsement from National and International software consortia and associations influential in software education.</p> <p>- Convened DoD-wide Software Acquisition Training and Education Working Group, reviewed core competencies for software in 13 DoD Acquisition career fields, developed a set of core competencies for the PM career field.</p> <p>Objectives: Tools, techniques identified; program support provided to ACAT ID/IAM and special interest programs; and partners established, agenda set.</p> <p>Artifacts: System of Systems Engineering White Papers and Best Practices; initial studies of software issues; Program Protection implementation strategy; draft Graduate Software Engineering reference curriculum; software acquisition training core competencies.</p> <p><i>FY 2010 Plans:</i></p> <p>Support Acquisition Success:</p> <p>- Provide software and system assurance expertise for ACAT ID/IAM and special interest programs.</p> <p>Improve State-of-the-Practice of Software Engineering:</p>						

UNCLASSIFIED

R-1 Line Item #160

Page 12 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P805: Software Engineering and System Assurance		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none">- Develop strategies to address software systemic issues- Establish System Assurance policy for DoD acquisition programs.- Perform v2.0 update to the Capability Maturity Model Integration (CMMI).- Develop System of System (SoS) Engineering guidance to support specific customers (ie. Program Office Staffs), and specific issues (ie. T&E, M&S) based on pilot applications. <p>Provide Software Leadership and Outreach:</p> <ul style="list-style-type: none">- Participate in Service-led software initiatives, e.g., Army Strategic Software Improvement Program and multi-national forums, e.g., Software Intensive Systems Acquisition Improvement Group.- Continue implementation of Department/National strategic plan for meeting defense software requirements.- Lead the SoS Community in research and application via the National Defense Industrial Association (NDIA) System of Systems SE Committee. <p>Ensure Adequate Software Resources to Meet DoD Needs:</p> <ul style="list-style-type: none">- Expand DoD Acquisition curriculum efforts beyond the Program Manager career field into systems engineering.- Publish the Graduate Software Engineering Reference Curriculum- Develop education and training modules for program protection and SoS SE. <p>Objectives: Tools and techniques updated; program support provided to ACAT ID/IAM and special interest programs; expanded set of partners and updated agenda.</p> <p>Artifacts: SoS Engineering Guide, CMMI v2.0, DoD Software Strategic Plan; conference sponsorship and participation (e.g., Systems and Software Technology Conference, Systems Engineering); and updated DAU curriculum with software considerations.</p>						

UNCLASSIFIED

R-1 Line Item #160

Page 13 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>		R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>		PROJECT P805: <i>Software Engineering and System Assurance</i>	
B. Accomplishments/Planned Program (\$ in Millions)					
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO
<i>FY 2011 Base Plans:</i> Efforts transferred to a new Systems Engineering Program Element in FY 2011.					
Accomplishments/Planned Programs Subtotals		2.873	2.764	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy Not applicable.					
E. Performance Metrics Not applicable.					

UNCLASSIFIED

R-1 Line Item #160

Page 14 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>				PROJECT P806: <i>Energy</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P806: <i>Energy</i>	1.500	1.410	1.636	0.000	1.636	1.729	1.919	2.006	2.097	Continuing	Continuing
Quantity of RDT&E Articles											
<p>A. Mission Description and Budget Item Justification</p> <p>This program implements how the Department's energy demand and related costs, as outlined in the Fully Burdened Cost of Fuel (FBCF) construct detailed in the February 2008 Defense Science Board Energy Task Force report, impacts systems acquisition and life-cycle management. The 2009 National Defense Authorization Act (NDAA) mandated use of the FBCF in systems development and assessments of total ownership cost of systems.</p> <p>This effort focuses on the analytical development and integration of the "Fully Burdened Cost of Fuel" (FBCF) concept into all DoD acquisition programs that will demand fuel in the battlespace, as formally required by the 2009 NDAA, DoD Instruction 5000.02 and other DoD strategic guidance. This work includes development of the analytical methodology, acquisition guidance and regulation revisions, and oversight of implementation across the Department. The premise of this work is that DoD cost of ownership analysis methods significantly under-value the operational delivery costs and other implications of fuel demand in the force. By accurately valuing all of the real costs of delivering fuel to the operator, acquisition programs, modernization (e.g. Army RESET) and research and development efforts will have a much clearer understanding of the value of investing to reduce energy demand.</p> <p>Supporting the "Fully Burdened Cost of Fuel" implementation are efforts to include these same operational fuel delivery variables more realistically in the Joint Strategic Planning Process (force planning) and the Joint Capability Integration and Development System (JCIDS) (requirements) so as to better understand the relationship between fuel demand and operational capability across the current and future force.</p> <p>B. Accomplishments/Planned Program (\$ in Millions)</p>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Energy Initiatives						1.500	1.410	1.636	0.000	1.636	
<i>FY 2009 Accomplishments:</i> Co-sponsored case study analyses with the Navy Energy Coordination Office (NECO) and the Joint Staff J-4 to determine the key variables and metrics for treating energy as a mature capability factor											

UNCLASSIFIED

R-1 Line Item #160

Page 15 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605804D8Z: Development Test & Evaluation		PROJECT P806: Energy		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
in the DoD requirements development and acquisition processes. This includes development of a viable methodology for calculating the Fully Burdened Cost of Fuel (FBCF) and then for applying it within realistic acquisition trade-space decision-making, in compliance with current law. Findings, mostly due in early FY 2010, will inform methodological guidance and selection of capabilities and programs. Supported Service wargaming and force planning activities to include energy delivery risks in all domains. Published methodological guidance for Components to calculate the FBCF in acquisition and scientific programs. Provided staff and analytical support to Service energy planning efforts and related guidance development. Supported the Quadrennial Defense Review (QDR) writing team on energy and related climate change issues, supporting statutory requirements.						
FY 2010 Plans: Develop Fully Burdened Cost of Fuel (FBCF) analytical methodology and refine supporting methodological guidance (instructions, manuals and handbooks) and metrics for integration and application of the FBCF into DoD acquisition system to appropriately manage energy in life-cycle costing and total cost of ownership. Support post-QDR implementation work on energy and any related climate change matters. Develop and deploy a FBCF Defense Acquisition University curriculum to educate the acquisition workforce. Provide management and oversight of FBCF use within the acquisition business process. Support energy Key Performance Parameter methodological development and application within programs.						
FY 2011 Base Plans: Refine FBCF guidance, methodology, metrics and application. Provide management and oversight of FBCF use within the acquisition business process. Develop and apply metrics to assess DoD progress on managing energy costs and related energy risk.						
Accomplishments/Planned Programs Subtotals		1.500	1.410	1.636	0.000	1.636

UNCLASSIFIED

R-1 Line Item #160

Page 16 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>	PROJECT P806: <i>Energy</i>
<p><u>C. Other Program Funding Summary (\$ in Millions)</u> N/A</p> <p><u>D. Acquisition Strategy</u> Not applicable.</p> <p><u>E. Performance Metrics</u> Not applicable.</p>		

UNCLASSIFIED

R-1 Line Item #160

Page 17 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>				PROJECT P052: <i>Contingency Acquisition Support Model</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P052: <i>Contingency Acquisition Support Model</i>	0.000	6.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Ebusiness capabilities critical to meet the enterprise-wide needs of the procurement community by including contingency capabilities for 3 in 1 and Contingency Acquisition Support Model											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Not applicable. <i>FY 2009 Accomplishments:</i> Not Applicable. <i>FY 2010 Plans:</i> Ebusiness capabilities critical to meet the enterprise-wide needs of the procurement community by including contingency capabilities for 3 in 1 and Contingency Acquisition Support Model.							0.000	6.438	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals							0.000	6.438	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A											
D. Acquisition Strategy N/A											

UNCLASSIFIED

R-1 Line Item #160

Page 18 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605804D8Z: <i>Development Test & Evaluation</i>	PROJECT P052: <i>Contingency Acquisition Support Model</i>
<u>E. Performance Metrics</u> Not applicable.		

UNCLASSIFIED

R-1 Line Item #160

Page 19 of 19